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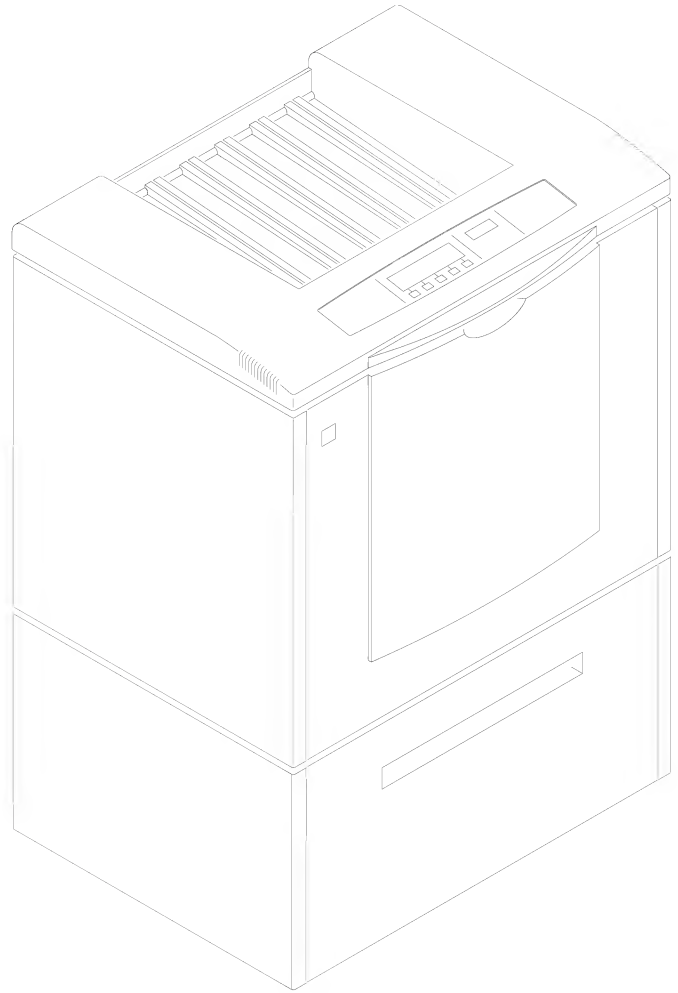
PREVENTIVE MAINTENANCE for the *Kodak X-Omat* 3000 RA PROCESSOR



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Important

Reliable operation of the PROCESSOR requires that all parts are cleaned, adjusted, and lubricated correctly. More frequent maintenance may be necessary because of site characteristics or actual usage. The following guidelines are for PROCESSORS installed according to the Site Specifications, Publication Number 5B6329.

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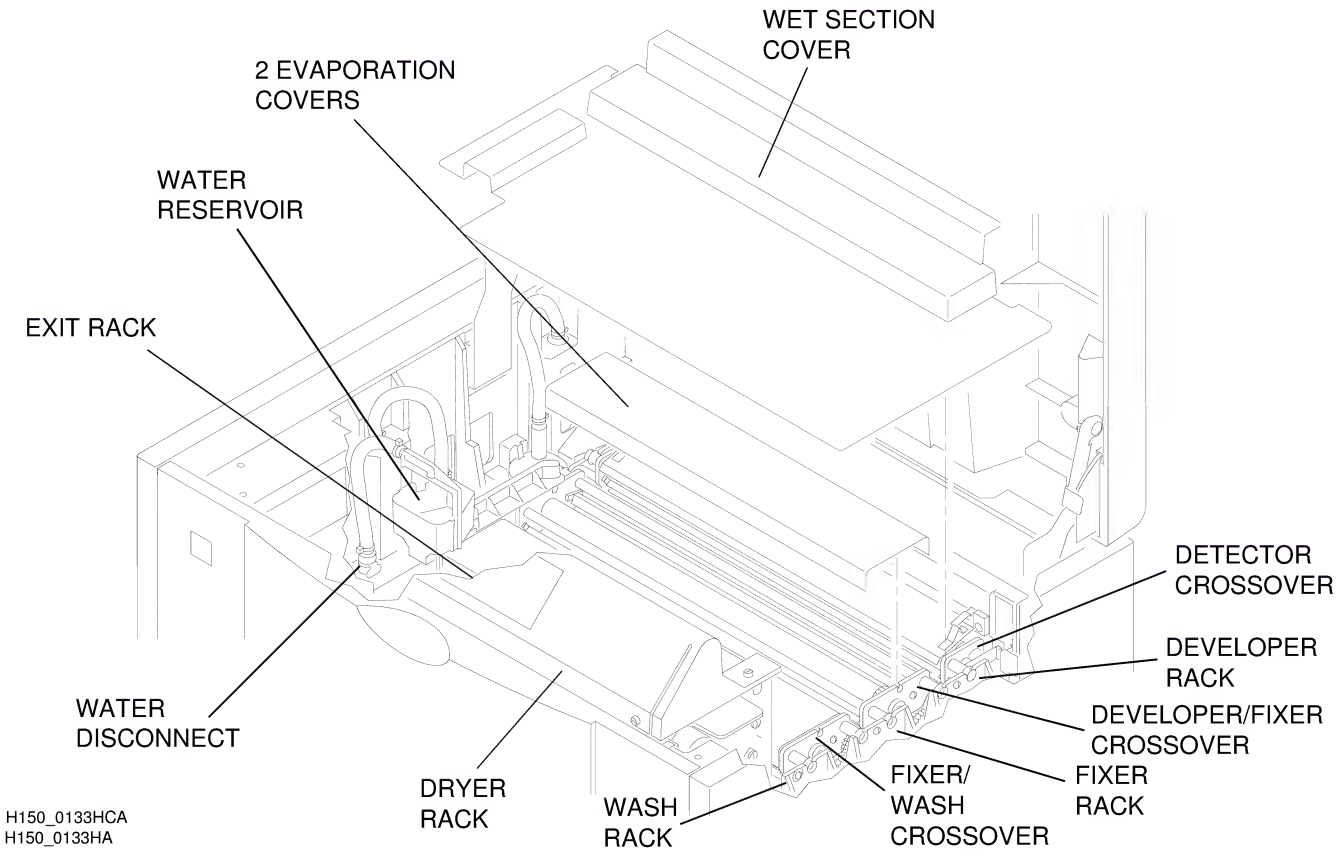
Section 1: Weekly Preventive Maintenance

Important

The operator of the PROCESSOR should weekly perform the preventive maintenance procedures in this section.

Figure 1



[1] De-energize the PROCESSOR.

[2] Lift the TOP COVER.

[3] Remove the WET SECTION COVER.

[4] Disconnect the WATER RESERVOIR from the CROSSOVERS.

[5] Remove the following parts:

a. EVAPORATION COVERS

b. all CROSSOVERS

c. WASH RACK

[6] Rinse the 3 CROSSOVERS and the WASH RACK with warm water, 44 C(110 F)or less. Wipe the ROLLERS and the GUIDE SHOES with a damp, soft, synthetic sponge.

[7] Allow the DETECTOR CROSSOVER to air dry before you install it in the PROCESSOR.

[8] Check that all the ROLLERS on all the CROSSOVERS and on the WASH RACK rotate freely.

[9] Check the squareness of the CROSSOVERS and the WASH RACK. See the procedures in the Adjustments and Replacements Manual, Publication Number 5B6331.

[10] Check that the CROSSOVER TROUGHS are not broken or cracked.

[11] Wipe any deposits from the processing section of the PROCESSOR.

[12] Install the following parts. Check that each assembly seats firmly.

a. WASH RACK

b. all CROSSOVERS

[13] Connect the WATER RESERVOIR to the CROSSOVERS.

[14] Check that the WATER DISCONNECT is positioned correctly.

[15] Install the following parts. Check that each assembly seats firmly.

a. EVAPORATION COVERS

b. WET SECTION COVER

[16] Energize the PROCESSOR.

[17] Process a test film and check for correct operation of the PROCESSOR.

Section 2: Monthly Preventive Maintenance

Important

Completion of the monthly preventive maintenance procedures is recommended to ensure the optimum reliability of the PROCESSOR.

[1] De-energize the PROCESSOR.

[2] Lift the TOP COVER.

[3] Remove the following parts:

a. WET SECTION COVER

b. WATER DISCONNECT and WATER RESERVOIR

c. EVAPORATION COVERS

d. all CROSSOVERS

e. EXIT RACK

f. DRYER RACK

g. WASH RACK

Caution

To prevent contamination of the developer and fixer solutions when you remove the FIXER RACK and the DEVELOPER RACK, place the SPLASH GUARD between the DEVELOPER TANK and the FIXER TANK. Use the DRIP TRAY whenever you remove or install the RACKS.

[4] Install the SPLASH GUARD between the DEVELOPER TANK and the FIXER TANK.

[5] Remove the following parts:

a. FIXER RACK

b. SPLASH GUARD

c. DEVELOPER RACK

[6] Rinse all the RACKS and the CROSSOVERS with warm water, 44 C(110 F)or less. Wipe the ROLLERS and the GUIDE SHOES with a soft, synthetic sponge.

[7] Remove and clean the CROSSOVER TROUGHS. Check that the holes in the CROSSOVER TROUGHS are free from biological growth or other obstructions.

[8] Install the CROSSOVER TROUGHS.

[9] On all RACKS, check that:

(a) all ROLLERS rotate freely

(b) the ROLLERS are clean and smooth

(c) the GEARS do not have excessive wear

(d) the BEARINGS do not have excessive wear

(e) the E-RINGS and SPRINGS are not broken, missing, or corroded

[10] If necessary, install new parts.

[11] Check the RACKS for squareness. If necessary, see the procedure in the Adjustments and Replacements Manual, Publication Number 5B6331.

[12] Check that the SLOTS in the AIR TUBES are clean. If necessary, do the additional steps below.

(a) Remove the BAFFLES from the AIR TUBES.

(b) Rinse the BAFFLES with water.

(c) Clean the AIR TUBES with a bottle brush and rinse with water.

[13] Wipe any deposits from the processing section of the PROCESSOR.

[14] Change the DEVELOPER FILTER. If necessary, see the procedure in the Adjustments and Replacements Manual, Publication Number 5B6331.

[15] Allow the DETECTOR CROSSOVER to air dry before you install it in the PROCESSOR.

[16] Clean the WATER RESERVOIR. Check that the holes in the WATER RESERVOIR are free of biological growth and other obstructions.

[17] Install the RACKS.

[18] Install the following parts. Check that each part seats firmly.

a. CROSSOVERS

b. WATER RESERVOIR and WATER DISCONNECT

c. EVAPORATION COVERS

d. WET SECTION COVER

[19] Clean the REPLENISHMENT STRAINERS that are between the REPLENISHMENT TANKS and the REPLENISHMENT PUMPS.

[20] Check the water supply FILTER. If necessary, change the FILTER.

Caution

- Any obstruction such as biological growth, small bends, or an upward sloping WASH DRAIN HOSE can cause wash water to return to the WASH TANK causing an overflow of water.
- Concentrations of chlorine bleach higher than 10% or allowing the chlorine bleach to remain in the PROCESSOR for longer than 30 minutes can cause damage to the PROCESSOR.

[21] Check the WASH DRAIN for biological growth, small bends, or other obstructions. To remove biological growth do the steps below:

(a) Fill the WASH TANK and DRAIN with a 10% solution of chlorine bleach.

(b) Wait a **minimum of 20 minutes and a maximum of 30 minutes.**

(c) Drain the chlorine bleach solution and rinse the TANK and DRAIN thoroughly with water before you return the PROCESSOR to normal use.

Warning

- Drains must be made of chemically resistant, non-corrosive material. Use PVC or the equivalent.
- The drain must have a minimum diameter of 7.6 cm (3 in.) and be free of obstruction.
- Drain service must comply with all local codes.

[22] Correctly route the WASH DRAIN HOSE to slope down toward the WASH DRAIN. If necessary, use REINFORCED HOSES that resist making small bends. Right angle ELBOW FITTINGS are also available. The Part Numbers are:

- 696442 - Reinforced HOSE, 5/8-in. I.D. Order by the foot.
- 1C4521 - ELBOW FITTING, 5/8 in.
- 696441 - Reinforced HOSE, 1-in. I.D. Order by the foot.
- 1C4524 - ELBOW FITTING, 1 in.

[23] Energize the PROCESSOR.

[24] Process a test film and check for correct operation of the PROCESSOR.

Section 3: 3 Month Preventive Maintenance

[1] De-energize the PROCESSOR.

[2] Lift the TOP COVER.

[3] Open the FIXER and DEVELOPER DRAIN VALVES to drain the solutions from the PROCESSOR.

[4] Remove the following parts:

a. WET SECTION COVER
b. WATER DISCONNECT and WATER RESERVOIR
c. EVAPORATION COVERS
d. all CROSSOVERS
e. EXIT RACK
f. DRYER RACK
g. WASH RACK

Caution

To prevent contamination of the developer and fixer solutions when you remove the FIXER RACK and the DEVELOPER RACK, place the SPLASH GUARD between the DEVELOPER TANK and the FIXER TANK. Use the DRIP TRAY whenever you remove or installation the RACKS.

[5] Install the SPLASH GUARD between the DEVELOPER TANK and the FIXER TANK.

[6] Remove the following parts:

a. FIXER RACK
b. SPLASH GUARD
c. DEVELOPER RACK

Warning

- Carefully follow all safety precautions and directions included with the *Kodak* FIXER/WASH SYSTEM CLEANER and *Kodak* DEVELOPER SYSTEM CLEANER AND NEUTRALIZER.
- The RACKS in the PROCESSOR have hollow ROLLERS. Use the instructions for cleaning RACKS with hollow ROLLERS. Do not immerse RACKS with hollow ROLLERS in SYSTEM CLEANER. SYSTEM CLEANER that remains inside the ROLLERS will contaminate the processing solutions.
- When circulating SYSTEM CLEANER or water through the recirculation system, energize the developer COOLING SOLENOID and the RECIRCULATION PUMP using the internal diagnostics. See the Diagnostics Manual, Publication Number 5B6333. Otherwise the following may occur:
  - The effectiveness of the DEVELOPER SYSTEM CLEANER AND NEUTRALIZER will be greatly reduced because of the developer remaining in the HEAT EXCHANGER.
  - The DEVELOPER SYSTEM CLEANER AND NEUTRALIZER remaining in the HEAT EXCHANGER will contaminate the new developer when the PROCESSOR is returned to operation.

[7] Clean the DEVELOPER RACK and the DEVELOPER TANK with *Kodak* DEVELOPER SYSTEM CLEANER AND NEUTRALIZER, CAT No. 843 4615.

[8] Clean the FIXER RACK, the WASH RACK, and the FIXER TANK with *Kodak* FIXER/WASH SYSTEM CLEANER, CAT No. 139 5110.

[9] Clean the WASH TANK with *Kodak* FIXER/WASH SYSTEM CLEANER or, if biological growth exists, with a 10% solution of chlorine bleach.

[10] If necessary, clean the LEVEL SENSOR PROBES with the correct SYSTEM CLEANER.

[11] Rinse the following parts with warm water, 44 C (110 F) or less. Wipe the ROLLERS and the GUIDE SHOES with a soft, synthetic sponge.

a. CROSSOVERS

b. EVAPORATION COVERS

c. WET SECTION COVER

Note

If necessary, you may use DEVELOPER SYSTEM CLEANER AND NEUTRALIZER on the DEVELOPER/FIXER CROSSOVER and FIXER/WASH SYSTEM CLEANER on the FIXER/WASH CROSSOVER.

[12] Remove and clean the CROSSOVER TROUGHS. Check that the holes in the CROSSOVER TROUGHS are free from biological growth or other obstructions.

[13] Install the CROSSOVER TROUGHS.

[14] On all RACKS, check that:

(a) all ROLLERS rotate freely

(b) the ROLLERS are clean and smooth

(c) the GEARS do not have excessive wear

(d) the BEARINGS do not have excessive wear

(e) the E-RINGS and SPRINGS are not broken, missing, or corroded

(f) the CHAIN is not worn or out of adjustment

[15] If necessary, install new parts.

[16] Check the RACKS for squareness. If necessary, see the procedure in the Adjustments and Replacements Manual, Publication Number, 5B6331.

[17] Check that the SLOTS in the AIR TUBES are clean and in the correct positions. If necessary do the additional steps below.

(a) Remove the BAFFLES from the AIR TUBES.

(b) Rinse the BAFFLES with water.

(c) Clean the AIR TUBES with a bottle brush and rinse with water.

[18] Wipe above and below the ENTRANCE SLOT on the 6000 UNIVERSAL FILM DETECTOR BOARD with a damp, synthetic sponge.

[19] Wipe any chemical deposits from the processing section of the PROCESSOR.

[20] Install a new DEVELOPER FILTER. If necessary, see the procedure in the Adjustments and Replacements Manual, Publication Number 5B6331.

[21] Allow the DETECTOR CROSSOVER to air dry before you install it in the PROCESSOR.

[22] Clean the WATER RESERVOIR. Check that the holes in the WATER RESERVOIR are free of biological growth and other obstructions.

[23] Install the following parts. Check that each part seats firmly.

a. RACKS

b. CROSSOVERS

c. WATER RESERVOIR and WATER DISCONNECT

d. EVAPORATION COVERS

e. WET SECTION COVER

[24] Clean the REPLENISHMENT STRAINERS located between the REPLENISHMENT TANKS and the REPLENISHMENT PUMPS.

[25] Check the water supply FILTER. If necessary, change the FILTER.

Caution

- Any obstruction such as biological growth, small bends, or an upward sloping WASH DRAIN HOSE can cause wash water to return to the WASH TANK causing an overflow of water and damage to the ELECTRICAL BOX.
- Concentrations of chlorine bleach higher than 10% or allowing the chlorine bleach to remain in the PROCESSOR for longer than 30 minutes can cause damage to the PROCESSOR.

[26] Check the WASH DRAIN for biological growth, small bends, or other obstructions. To remove biological growth do the steps below:

(a) Fill the WASH TANK and DRAIN with a 10% solution of chlorine bleach.

(b) Wait a **minimum of 20 minutes and a maximum of 30 minutes.**

(c) Drain the chlorine bleach solution, and rinse the TANK and DRAIN thoroughly with water before returning the PROCESSOR to normal use.

Warning

- Drains must be made of chemically resistant, non-corrosive material. Use PVC or the equivalent.
- The drain must have a minimum diameter of 7.6 cm (3 in.) and be free of obstruction.
- Drain service must comply with all local codes.

[27] Correctly route the WASH DRAIN HOSE to slope down toward the WASH DRAIN. If necessary, use REINFORCED HOSES that resist making small bends. Right angle ELBOW FITTINGS are also available. The Part Numbers are:

- 696442 - Reinforced HOSE, 5/8-in. I.D. Order by the foot.
- 1C4521 - ELBOW FITTING, 5/8 in.
- 696441 - Reinforced HOSE, 1-in. I.D. Order by the foot.
- 1C4524 - ELBOW FITTING, 1 in.

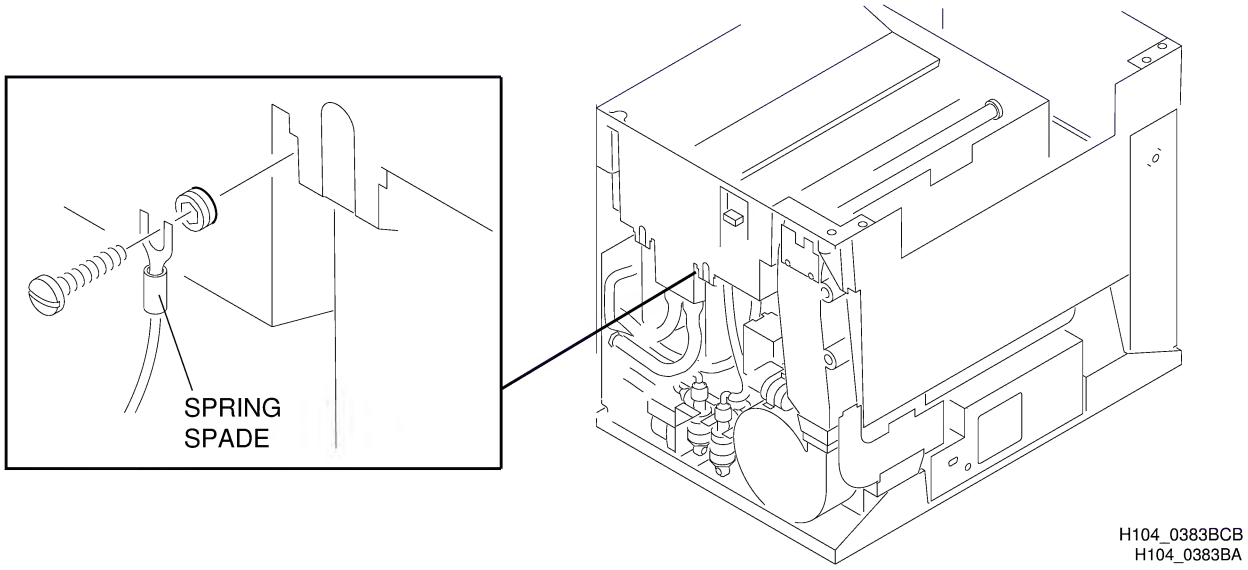
[28] Check the DRIVE CHAIN.

(a) If the DRIVE CHAIN is dry, apply lubricant to the DRIVE CHAIN. Use NLG1 - No. 2 LITHIUM BALL and ROLLER BEARING GREASE TL-2324.

(b) If the DRIVE CHAIN is rusty, remove it and install a new DRIVE CHAIN.

(c) Adjust the tension of the DRIVE CHAIN. If necessary, see the procedure in the Adjustments and Replacements Manual, Publication Number 5B6331.

Figure 2



[29] Check the SPRING SPADES on the LEVEL SENSOR PROBES for corrosion. If necessary, clean or install new SPRING SPADES.

[30] Check the operation of the DETECTOR SWITCHES. If necessary, adjust the DETECTOR SWITCHES. See the procedures in the Adjustments and Replacements Manual, Publication Number 5B6331.

[31] Close the DRAIN VALVES and fill the processing TANKS with processing solutions and starter where necessary. See the Operator Manual, Publication Number 5B6328, for filling instructions.

[32] Energize the PROCESSOR.

[33] Process a test film and check the PROCESSOR for correct operation.

[34] Check the negative pressure at the EXHAUST VENT for the DRYER. See the Installation Instructions, Publication Number 5B6330.

Note

An AUXILIARY VENTILATION FAN KIT is available for sites that do not meet exhaust requirements.

[35] Calibrate the REPLENISHMENT PUMPS. See the section “Calibration of the Replenishment System” in the Operator Manual, Publication Number 5B6328.

Section 4: Preventive Maintenance Schedule

Part or Assembly	Weekly*	Monthly†Ä†† †Ä†ë†	3 Month Schedule‡
DETECTOR CROSSOVER	C		
DEVELOPER/FIXER CROSSOVER	C		
FIXER/WASH CROSSOVER	C		
WASH RACK	C		C(2)
DEVELOPER RACK		I,C	C(1)
FIXER RACK		I,C	C(2)
DRYER RACK		I,C	
TOP EXIT RACK		I,C	
RACK BEARINGS, CHAINS, and DRIVE GEARS		I	
Squareness of RACKS		I	
DRYER AIR TUBES		I,C	
DEVELOPER FILTER		R	
REPLENISHMENT STRAINERS and FILTERS		C	
Water Supply FILTER		R	
DRAIN HOSES		I,R	
Ventilation Exhaust			T
DRIVE MOTOR CHAIN			I,L
LEVEL SENSOR PROBES			C
SPRING SPADES on the LEVEL SENSOR PROBES			C(3)
DEVELOPER PROCESSOR TANK			C(1)
FIXER and WASH PROCESSOR TANKS			C(2)
Calibration of the REPLENISHMENT PUMPS			T
DETECTOR SWITCHES			T
6000 CIRCUIT BOARD HOUSING			C(4)
WATER RESERVOIR		C	

I	=	Inspect for condition and adjust or install new parts, if necessary.
L	=	Lubricate with recommended material.
R	=	Replace, if necessary.
T	=	Test and adjust, if necessary.

C	=	Rinse and clean carefully and completely using warm water and a soft synthetic sponge.
C(1)	=	Clean with *Kodak* DEVELOPER SYSTEM CLEANER AND NEUTRALIZER.
C(2)	=	Clean with *Kodak* FIXER/WASH SYSTEM CLEANER.
C(3)	=	Clean any corrosion from the SPRING SPADES.
C(4)	=	Clean with a damp, synthetic sponge.

* The weekly preventive maintenance procedures can be performed by either the operator of the PROCESSOR or by the trained service provider.

† Completion of the monthly preventive maintenance procedures is recommended to ensure the optimum reliability of the PROCESSOR.

‡ The 3 month schedule is a guideline for sites adhering to the site specifications issued by Kodak. Actual usage and site characteristics may require shorter intervals between maintenance.

Section 5: Publication History

Print Date	Pub. No.	ECO No.	Affected Pages	File Name	Description
October 1995	5B6746	2650-030	All Pages	pm3434_1_030.doc	1st Printing of Manual
November 1995	5B6746	2650-039	Front and Back Covers	pm3434_1_039.doc	Graphic Unification Printing
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